

## Low Leakage Current, Standard Tantalum J-Lead



#### **FEATURES**

- Lower DCL 0.005 x CV
- Optional DCL sorting conditions
- Improved Failure Rate: 0.5%/1000 hours, 85°C, RV
- Low ESR options available
- 100% surge test for power supply circuit



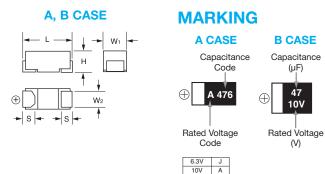


#### **APPLICATIONS**

- IoT devices
- Wearable devices
- Industrial sensors

#### **CASE DIMENSIONS:** millimeters (inches)

Code	EIA Code	EIA Metric	L	W <sub>1</sub>	W <sub>2</sub>	Н	S
Α	1206	3216-18	$3.20 \pm 0.20$ (0.126 ± 0.008)	1.60 ± 0.20 (0.063 ± 0.008)	1.20 ± 0.10 (0.047 ± 0.004)	1.60 ± 0.20 (0.063 ± 0.008)	0.80 ± 0.20 (0.031 ± 0.008)
В	1210	3528-21	3.50 ± 0.20 (0.138 ± 0.008)	2.80 ± 0.20 (0.110 ± 0.008)	2.20 ± 0.10 (0.087 ± 0.004)	1.90 ± 0.20 (0.075 ± 0.008)	0.80 ± 0.20 (0.031 ± 0.008)



#### **HOW TO ORDER**



F93

Capacitance
Code
pF code: 1st two digits
represent significant figures,
3rd digit represents multiplier
(number of zeros to follow)

M Tolerance

ToleranceCase $K = \pm 10\%$ Size $M = \pm 20\%$ Seetableabove

Packaging Section

BE 🗆

BE1 = 0.005xCV

#### **TECHNICAL SPECIFICATIONS**

Category Temperature Range:	-55 to +125°C			
Rated Temperature:	+85°C			
Capacitance Tolerance:	±20%, ±10% at 120Hz			
Dissipation Factor:	Refer to next page			
ESR 100kHz:	Refer to next page			
Leakage Current:	After 5 minutes application of rated voltage, leakage current at 20°C			
	is not more than 0.005 x CV (BE1 suffix).			
Capacitance Change By Temperature	+15% Max. at +125°C			
	+10% Max. at +85°C			
	-10% Max. at -55°C			



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# CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

Capac	itance	Rated Voltage			
μF Code		6.3V (0J)	10V (1A)		
47	476	A/B	A/B		
68	686				
100	107	A/B			

Released ratings

Please contact to your local AVX sales office when these series are being designed in your application.

#### **RATINGS & PART NUMBER REFERENCE**

AVX	Case Capacitance	Rated DCL	DCL	DF	ESR *1	100kHz RMS Current (mA)			*2		
Part No.	Size	(μ <b>F</b> )	Voltage (V)	(μΑ)	@ 120Hz (%)	@ 100kHz (Ω)	25°C	85°C	125°C	∆C/C (%)	MSL
	6.3 Volt										
F930J476#AABE1	Α	47	6.3	1.5	18	2.5	173	156	69	*	3
F930J476#BABE1	В	47	6.3	1.5	6	1.0	292	262	117	*	3
F930J107#AABE1	Α	100	6.3	3.2	35	2.0	194	174	77	±15	3
F930J107#BABE1	В	100	6.3	3.2	14	0.9	307	277	123	*	3
10 Volt											
F931A476#AABE1	Α	47	10	2.4	40	2.0	194	174	77	±15	3
F931A476#BABE1	В	47	10	2.4	8	1.0	292	262	117	*	3

<sup>\*2: △</sup>C/C Marked "\*"

#: "M" for ±20% tolerance, "K" for ± 10% tolerance.

Item	All Case (%)
Damp Heat	±10
Temperature cycles	±5
Resistance soldering heat	±5
Surge	±5
Endurance	±10

<sup>\*1</sup> Low ESR options are available. Please contact to your local AVX sales office.



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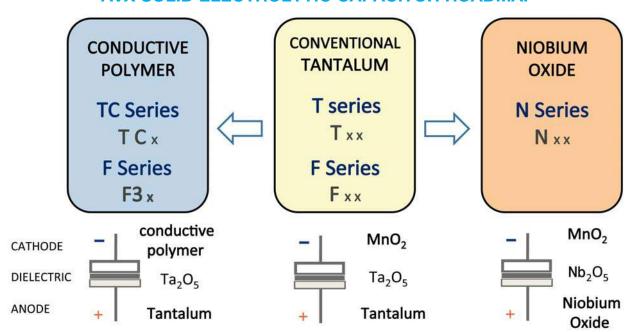
### **QUALIFICATION TABLE**

TEST	F93-BE series (Temperature range -55°C to +125°C)			
1551	Condition			
Damp Heat (Steady State)	At 40°C, 90 to 95% R.H., 500 hours (No voltage applied) Capacitance Change			
Temperature Cycles	-55°C / +125°C, 30 minutes each, 1000 cycles Capacitance Change			
Resistance to Soldering Heat	10 seconds reflow at 260°C, 5 seconds immersion at 260°C. Capacitance Change			
Surge	After application of surge voltage in series with a 33Ω resistor at the rate of 30 seconds ON, 30 seconds OFF, for 1000 successive test cycles at 85°C, capacitors shall meet the characteristic requirements in the table above. Capacitance Change			
Endurance	After 2000 hours' application of rated voltage in series with a 3Ω resistor at 85°C, or derated voltage in series with a 3Ω resistor at 125°C, capacitors shall meet the characteristic requirements in the table above.  Capacitance Change			
Shear Test	After applying the pressure load of 5N for 10±1 seconds horizontally to the center of capacitor side body which has no electrode and has been soldered beforehand on a substrate, there shall be found neither exfoliation nor its sign at the terminal electrode.			
Terminal Strength	Keeping a capacitor surface-mounted on a substrate upside down and supporting the substrate at both of the opposite bottom points 45mm apart from the center of capacitor, the pressure strength is applied with a specified jig at the center of substrate so that the substrate may bend by 1mm as illustrated. Then, there shall be found no remarkable abnormality on the capacitor terminals.			
Failure Rate	Failure Rate  0.5% per 1000 hours at 85°C, VR with 0.1Ω/V series impedance, 60% confidence level.			

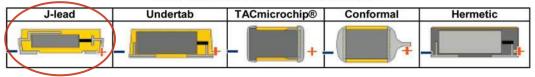


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#### **AVX SOLID ELECTROLYTIC CAPACITOR ROADMAP**



#### **Five Capacitor Construction Styles**



#### SERIES LINE UP: CONVENTIONAL SMD MnO<sub>2</sub>

